

Notice of Allowability

Application No.

10/625,926

Examiner

Tran N. Nguyen

Applicant(s)

IONEL ET AL.

Art Unit

2834

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to 2/14/05.
2. ☐ The allowed claim(s) is/are 1-34.
3. ☒ The drawings filed on 24 July 2003 are accepted by the Examiner.
4. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) ☐ All b) ☐ Some* c) ☐ None of the:
 1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.
THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

5. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
6. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
 - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
 - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
 - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.

Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
7. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. ☒ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☒ Information Disclosure Statements (PTO-1449 or PTO/SB/08),
Paper No./Mail Date _____
4. ☐ Examiner's Comment Regarding Requirement for Deposit
of Biological Material
5. ☐ Notice of Informal Patent Application (PTO-152)
6. ☐ Interview Summary (PTO-413),
Paper No./Mail Date _____
7. ☐ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other _____

DETAILED OFFICE ACTION

Allowable Subject Matter

Claims 1-34 are allowed.

Reason for Allowability

The following is an examiner's statement of reasons for allowance: the primary reason for the allowance is the including, in combination with other limitations recited in the claims, the limitations of an electrical machine comprising:

a stator including a plurality of stator teeth and one or more windings with compact coils disposed around the teeth,

the one or more windings having (m) phases and (p) poles, where (m) is an integer and is greater than or equal to two, where (p) is an integer, is greater than or equal to two, and is an even number; and

a rotor having a magnetization pattern including a magnetization skew of approximately $(2\pi/(mp))$.

Comparing to the prior-art of the record, the most relevant refs are USP 6,657,349 and 6,867,527. Both refs disclose the skew angles of the rotor magnets. However, USP 6,867,527 discloses the skew angle of the rotor magnet is determined in relation with the torque ripple fundamental frequency and the rotor rotary speed, while the USP 6,657,349 discloses the skew angle of the rotor magnet based on the number of torque ripples per rotation of the rotor determined by the number of magnetic pole of the magnet and the number of stator slot slots.

This present invention is similar to the USP 6,867, 525 that having the same inventor and assignee entities. The application and the patent share similar features of the skewed rotor magnet in the specification disclosures. However, the claimed features of this application and the patent are significantly distinguished from one another. The patent claims the skewed angle of the rotor magnets is determined by the output rating in relation with the length of the rotor, while the present application claims the skewed angle of the rotor magnets is determined by the

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relationship between number of phrase and number of stator teeth by $(2\pi/(mp))$. Even though the specifications of the patent and the present application disclose similar concepts and aspects, the claimed inventions between the patent and the present application are distinct from one another. Therefore, no double patenting rejection is appropriate.

Thus, none of the prior-art determines the skew angle based on the relationship between number of phrase and number of stator teeth as illustrated by the formula $(2\pi/(mp))$, as recited in the claimed invention. Therefore, none of the prior art references of the record, either stand-alone or in combination, has taught or suggest the above-mentioned features in combination with other limitations recited in the claims.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

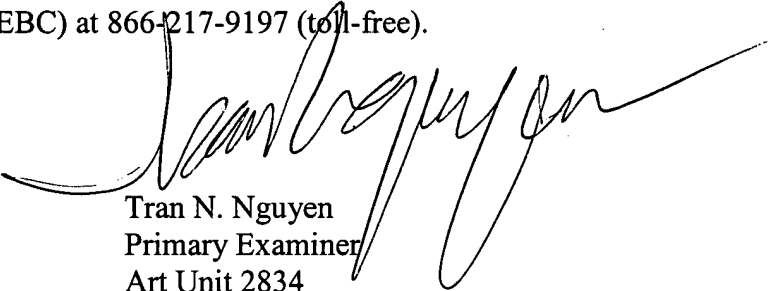
Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tran N. Nguyen whose telephone number is (571) 272-2030. The examiner can normally be reached on M-F 7:00AM-4:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Darren Schuberg can be reached on (571)-272-2045. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Tran N. Nguyen
Primary Examiner
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